Frankly Speaking

The Tempo of Progress

THE profession of traffic engineering faces a decade of opportunities for achievement never before existing. The tempo of progress in this country is accelerating—the next ten years should see our profession advance to a new high point in national importance.

This stimulating idea is a succinct statement of the dream of every thinking traffic engineer—a dream that is being speeded toward reality as the pressures of war broaden and advance the scope of our profession. Traffic engineers have been forced to cope with wartime problems of transit, human relations, automobile conservation, and others, not normal pre-war activities, and in so doing have developed valued relationships with people and organizations in allied fields. Traffic engineers have acquired, too, a better understanding of problems that must eventually come into the province of our expanding profession.

As one example of the metamorphosis taking place in the profession, the suggestion has been advanced that our name be changed to The Institute of Transport Engineers, as a better description of a society whose ultimate overall interest, according to the thinking of many of the members, is primarily that of economic transportation of persons and goods. This trend of thinking is another one of many landmarks indicating that we as a profession are leading away from the limited field of traffic control, signals, signs and markings, toward a broader horizon including more of planning and highway economics.

In the next 10 years, air travel will bring about great changes in highway operations, demanding the utmost skill and wisdom in effectively coordinating all forms of transportation. It is generally agreed that air transport will not take away from, but will actually cause an increase in motor vehicle operations, particularly in urban and suburban areas, where problems of congestion are already at their worst. The planning of airport sites and connecting roadways will become a problem of major importance and will be the concern of traffic engineers.

The rise in status and prestige of the profession of traffic engineering has been built upon sound knowledge, developed by research, and demonstrated by application.

But the tempo of progress is stepping up!

With the great problems of integrating highway with air and water transportation in the next decade, we have a tidal wave of opportunity to prove the intrinsic value of traffic engineering to the Nation's expanding transportation system—but we face a challenge—that of building up the necessary solid background of technical knowledge and skill at a fast enough rate to let us take full advantage of this opportunity.

Predicting Traffic Death Rates

by EARL ALLGAIER

SEEKING a practical method for evaluating the effectiveness of traffic safety and pedestrian protection programs, an analysis was made to determine the factors which have an important effect on State traffic death rates but over which traffic officials have little control. A formula has been devised by which certain factors can be used to predict what the death rate would be for each State if the safety programs and other activities were the same in all States.

Five factors over which traffic safety officials have little control were found to account for two-thirds of the variation in traffic death rates among States. In all, fourteen possible factors were analyzed. The five most important listed in order of importance are as follows, for all traffic death rates:

1. Gasoline consumption per capita.
2. Increase in gasoline consumption over previous year.
3. Per cent of highway mileage surfaced.
4. Population increase over a ten year period.
5. Vehicles per capita.

Three of the fourteen factors studied were found to account for one-half of the variation in pedestrian death rates among States. These are listed in order of their importance for pedestrian death rates:

1. Population increase over a ten year period.
2. Per cent of population that is urban.
3. Income per capita.

It is suggested that when comparisons are made between States regarding the effectiveness of educational or enforcement programs, the factors listed here be taken into consideration. This can readily be done by calculating the "predicted" death rate based on the factors mentioned. If the death rate is below the predicted rate for that State then it may be assumed that other factors, such as traffic safety programs and pedestrian protection programs have been above average and special credit is due that State.

It would appear that this method of comparing the efforts of officials in the various States is fairer than using the actual death rate for each State. This method makes allowances for the unfavorable factors which tend to cause a high rate and over which traffic safety officials have little control.

Factors Influencing Accident Rates

There are two somewhat arbitrary groups of causes which may produce accident rate differences: (1) physical factors over which administrators have little control, such as amount of driving, population characteristics, and (2) traffic safety programs, such as enforcement, driver training, etc. Because so many factors are operating simultaneously in any State, it is difficult to isolate the importance of any particular factor. It is quite obvious that the more people living in a State the more people that are likely to be killed in traffic accidents. It is nearly as obvious that the more driving that

INTERCORRELATIONS OF VARIOUS FACTORS RELATED TO TRAFFIC DEATHS

Variable Factor	Variable Factor														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Total traffic death rate, 1941															
2. Pedestrian death rate, 1941	.34														
3. Gas consumption per capita, 1941	.62	.25													
4. Increase in gas consumption, 1940-41	.36	.04	—.13												
5. Vehicles per capita, 1941	.35	.27	.84	—.28											
6. Highway mileage per capita, 1940	.23	—.08			.27										
7. Surfaced mileage per capita, 1940	.56	—.10	.51	.12	.36	.54									
8. % of mileage surfaced, 1940	—.34	—.11	.01	—.09	.15	—.28	—.49								
9. Population per square mile, 1940	—.19	.17			—.14	—.23	.43	.21							
10. % urban population, 1940	—.02	.45			.26	—.23	—.42	.36	.74						
11. Population increase, 1930-40	.56	.54	.32	.42	.12	.08	.25	—.35	—.21	—.02					
12. % of population (white), 1940	—.11	.10			.71	.12	.18	.25	.07	.40	—.26				
13. % of population (native born), 1940	.03	—.29			—.58	—.08	—.01	—.32	—.55	—.68	.17	—.62			
14. Income per capita, 1939	.28	.51			.60	.10	.09	.10	.46	.76	.12	.55	—.70		
15. % 4 years or less of education, 1940 (over 25 years of age)	.07	—.12			—.74	—.10	—.11	—.38	—.04	—.39	.31	—.90	.57	—.58	
16. % in school 5-24 years, 1940	—.04	—.11			.61	.07	.15	.16	—.08	.28	—.26	.56	—.43	.35	—.66

TABLE I

is done per person the more deaths that are likely to result. In comparing the records of States in recent years this has been taken into consideration by computing the mileage death rate rather than the population death rate.

In evaluating traffic safety programs, it is frequently difficult to differentiate between causes which are inherent in the State, such as density of population, literacy, etc., and the effects of traffic safety programs. This paper is an effort to point out an objective means for predicting what the traffic death rate would be due to certain physical factors alone if the safety programs including education and enforcement were about the same in the various States. If this is done then the effectiveness of a program in any State can be measured to a certain degree by comparing the actual death rate with the rate which you would expect because of the physical factors which are not a part of the program.

Factors Correlated

As a first step, the various factors which might have some relationship to the accident rate were related to the per capita traffic death rate for the various States and also related to each other for 1941. This was accomplished by computing the correlation coefficients between these variable factors, through a mathematical analysis.

A correlation coefficient (r) is a mathematical figure which shows the relationship between two factors and varies from 0 to 1 (plus or minus). 0 indicates no relationship while 1.00 indicates perfect correlation, a condition where whenever one factor increases in size the other increases a proportionate amount. A negative correlation indicates that when one factor gets larger, the other gets smaller. For example, the correlation between population increase and the death rate was .56 indicating that States with greater increase in population had higher death rates.

It is quite obvious from the Table I that other factors beside gas consumption, which indicates the amount of travel and therefore the exposure, are important in determining the traffic death rate for a given State.

What is the cumulative effect of these factors in determining the death rate? Fortunately, statisticians have worked out a method called multiple correlation whereby the importance of each variable in causing the death rate can be determined.

Five of these factors and their relative importance are listed below:

	Relative Weight
G—Gas consumption per capita in gallons per year	45%
I—Increase in gas consumption over previous year in gallons, per 100 gallons	29%
MS—% of highway mileage surfaced in miles, per 100 miles	18%
P—Population increase 1930-1940 persons, per 100 persons	7%
V—Vehicles per capita	1%

The Formula

When these are combined for the best prediction of the 1941 death rate for each State the following formula results:

$$\text{Traffic Death Rate} = .16827\,G + 1.3278\,I - .2361\,MS + .1933\,P + 1.9720\,V + 4.217$$

To illustrate the use of the formula the figures for California have been used.

$$\text{Predicted California Traffic Death Rate} = .16827(286) + 1.3278(12.5) - .2361(97) + .1933(21.7) + .19720(.44) + 4.217 = 51.1$$

The actual 1941 rate for California was 50.5. While at first it appears that California has an unusually high rate the rate is actually very near to what would be expected on the basis of the five factors included in the formula.

The predicted and actual rate for each State is shown graphically in Figure I. It is quite obvious that the five factors used account for most of the variation of death rates among States. Enforcement and education probably account for a major part of the remaining variance.

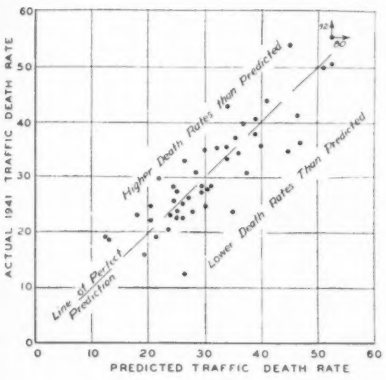

FIGURE I

RELATION OF ACTUAL DEATH RATE TO PREDICTED RATE

The fact that the points tend to fall along a line indicates that the most important factors which determine the traffic death rate have been included in the prediction formula.

Pedestrian Rate

Since for 1941 the correlation between the pedestrian and non-pedestrian death rate was rather low it is evident that the two rates were not affected by the same factors equally. An analysis similar to the foregoing indicated the following three factors as being the most important:

	Relative Weight
P—Population increase 1930-40	50%
U—Urban population, per cent, 1940	28%
I—Income per capita, 1939	22%

The following formula based on data from 38 States gave the best prediction:

$$\text{Pedestrian Death Rate} = .204\ P + .0452\ U + .00386\ I + 1.10$$

An original article by Earl Allgaier (Junior), Research Engineer, Traffic Engineering and Safety Department, American Automobile Association, Washington, D. C., assisted by Kenneth Wood, U.S.A.

FUNDS FOR CALIFORNIA POST-WAR ROADS

On August 4, 1943, $1,500,000 appropriated by the California State Legislature to provide for plans, surveys and specifications for postwar county highway construction projects became available.

This act has no connection with and is entirely separate from any Federal legislation.

Funds provided by the act are for surveying and preparation of plans and specifications only and NOT for construction or right of way.

It will be noted that the act includes county highways of major importance within cities. Projects within cities to be included in the budget will be determined by the county and agreed upon by the county and the respective cities within the county.

A budget proposal form was prepared for the purpose of obtaining the minimum information required for intelligent and orderly review of the proposed post-war planning program of the county; and to determine the

county's ability to perform the planning work in an efficient and economical manner, as contemplated by the act. Separate 'detail data of specific projects proposed' are to be made out for each individual project.

The projects then are to be listed on the summary sheet in their order of importance, and the summary sheet and the detail data sheet attached to the cover sheet and signed by the authorized county officials. The complete budget, together with a certified copy of the resolution adopting the budget, is to be submitted in triplicate to the appropriate district engineer of the division of highways. The budget is to be accompanied by a map of the county, indicating the various projects proposed and numbered to correspond with the project number listed in the budget.

After the program has been approved by the Director of Public Works, work can then start on surveys and detailed plans. No money is to be paid for work done before the list of projects is approved by the Director of Public Works.

"California Highways and Public Works"—September-October, 1943.

Urban Post-War Planning

by STUART C. HAWLEY

IN EVERY meeting the writer has attended those discussing the subject of urban post-war planning have continually referred to traffic problems, but none has stopped to consider that there is only one real traffic problem—congestion. Do away with congestion and the urban traffic problem ceases to exist.

The four major contributing causes of congestion are, in the order of their importance: pedestrians, intersecting traffic, parking and capacity limitations of existing roadways.

Pedestrian and intersectional congestion can be eliminated in one operation, more or less costly, but indisputably efficient. Separate the grades by lowering one stream of both pedestrian traffic and vehicular traffic one-half the desired clearance and raising the other stream the other half, provide stairways for pedestrians to cross right-angular traffic flow and insist on enforcement of regulations against crossing streets at points other than at intersections.

The great progress of this country is altogether the reward of transportation, and as passenger automobile transportation is a most important part of that progress, so a solution of the parking of automobiles is an integral part of our future progress.

Parking Facilities

Planning studies will determine the probable number of cars reasonably expected to be driven into each part of each business district. Following these studies, parking space can be provided by purchasing old dilapidated buildings and their sites, demolishing the buildings and erecting multi-floored, open-sided, ramp-entry parking facilities on the sites.

Such parking facilities should be municipal projects. No service station facilities should be provided. A monthly fee of three dollars per car (with a rate of fifteen cents an hour on the first floor or two for in-and-out shoppers) would permit the amortizattion of the cost within a reasonable time. As municipal projects, heavy tax charges would be eliminated.

These parking facilities should be of the most durable construction and built with the intention of adding additional floors when needed.

To ensure equal distribution of public funds between the larger and more politically important cities and the smaller towns, a ratio of the division of the cost should be 25 per cent to the local, 25 per cent to the state and 50 per cent to the federal government; and any community subscribing its share of the estimated cost should automatically be allotted the additional funds necessary.

With the pedestrian, intersection and parking problems solved, congestion ceases to be as formidable as it now is, because without pedestrian traffic and cars and trucks parked or standing at curbs, the capacity of the roadway is doubled or tripled.

Roadway capacity can be further increased by construction of a one-way circular freeway around the business area with ramps leading into and from the business district and through-ways leading to the residential and suburban areas.

It naturally follows that many of the proposed parking facilities be located as close to these ramps as possible. It may be desirable to make a material differential, as high as a dollar a month and five cents an hour between those near the ingress-egress ramps and those located in the heart of the business district, as an added incentive for the car owners to use the former.

This plan would not be opposed by private interests having extensive storage garage investment. The consensus of opinion, among owners and operators of existing parking lots and garages, is that these changes would help their businesses—especially if all the so-called service station activities such as the sale of gasoline, oil-change, lubrication, tires, repairs, etc., were excluded from the proposed parking facilities.

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Ohio Manual of Traffic Control Devices

by HARRY E. NEAL

THE Division of Traffic and Safety of the Ohio Department of Highways has recently prepared and published a Manual of Traffic Control Devices for Streets and Highways, in compliance with the provisions of the Uniform Traffic Act of Ohio which became effective September 6, 1941. This Act, which is modeled after the Uniform Act Regulating Traffic on Streets and Highways prepared by the National Conference on Street and Highway Safety, provides that the State Highway Department shall adopt a manual and specifications for a uniform system of traffic control devices for use upon highways within the State. It is provided also that such uniform system shall insofar as possible conform to the system as approved by the American Association of State Highway Officials and that all such traffic control devices erected after the effective date of the Act shall conform to the State manual and specifications.

Actual preparation of the Manual was begun early in 1941 in anticipation of the passage of the Uniform Act. Immediately after the passage of the Act on May 12, 1941, an order

was placed for the printing and the paper was purchased by the State Bindery. In the light of later events, it appears probable that it would have been impossible to publish the Manual until after the war if the paper and printing had not been contracted for and a large part of the text set up in type before Pearl Harbor.

Description of the Manual

The Ohio Manual is in loose leaf form 6½ inches by 9 inches. The loose leaf form was adopted so that revisions could be made from time to time without the necessity of reprinting the entire manual.

The Manual is divided into four parts as follows:

I. Signs
II. Pavement Markings
III. Obstruction and Road Delineation Markings
IV. Signals

Part One is divided into the following sub-sections: Guide Signs, Information Signs, Warning Signs, Regulatory Signs, Parking Signs, Miscellaneous Signs, and Special Signs. The design, color and erection details of each sign are all contained in the discussion of the sign. In other words, all details and specifications of each individual sign, the criteria for its use and details of erection, are discussed under that sign. This necessitates some repetition but this arrangement was considered more accommodating to those who will use the Manual. Plates, showing erection details, were included at appropriate places to further simplify the Manual's use by field men. Likewise, an illustration of the sign accompanies the description of that sign.

In Part Two, pavement markings are described and specified as to size, color, location, and other details. Ohio uses a continuous four-inch white center line with yellow no-passing lines of the same width wherever the sight distance is less than 600 feet and at intersections regulated by stop signs or traffic signals.

For all lettering painted on the pavement, the Manual specifies that elongated letters and numerals be used. A set of numerals and an alphabet are given to facilitate either the fabrication of stencils or the laying out of the letters on the pavement itself.

Obstruction and road delineation markings are discussed in Part Three. In this section, culvert and bridge markers, bridge-end markers, guide markers, the reflectorization of guard rail posts, road edge reflectors and markings for bridge piers and abutments are discussed and illustrated. So also are clearance markings for overhead structures, and protection for bridge piers, dividing strips and traffic islands and end protection for safety zones. Specifications for locating and erecting the markers and for painting the markings are clearly stated.

Part Four covers traffic signals. The Manual is applicable to all traffic control devices on all the streets and highways of Ohio. Consequently, Part Four sets forth rather broad specifications for the application, types of signal controllers, and location of signals at intersections. Specifications relating to the design and operation of new or replaced signals are more definitely fixed. Figures show the standard vertical and horizontal arrangement of signal lenses and the standard color sequence without a pedestrian clearance period.

An appendix follows Part Four. Contained therein are instructions for the use of the ball bank indicator in determining safe speeds on curves, instructions for the use of road work signs and red flags, instructions for handling one way traffic and information relative to the use and erection of high water markings. Specifications for reflector buttons, methods of test-

ing reflector buttons, an alphabet to use on pavements and a drawing showing standard barricades and gates for traffic maintained construction jobs are also described and illustrated. Finally a tabular arrangement of specifications and erection details for all the signs discussed in Part One is provided as a quick reference and guide to those in the field who erect the signs.

The Manual contains an illustrated sign index. To further facilitate the use of the Manual, a complete index of it is being planned.

Correction Inserts

It is realized that errors may have inadvertently been made in the compilation and printing of the material in this edition, that some needed signs have been omitted, and that a few erection details and sign legends should be changed. The post binding method was adopted in order that such discrepancies could be corrected and inserted without reprinting the entire book. In the near future, corrected sheets will be sent to everyone who now has a copy of the Manual.

Much credit is due to the county and city traffic officials, to the members of the Engineering Committee of the Ohio Traffic Safety Council, and to others who assisted in the determination of the standards and specifications set forth in this Manual. It is only through the cooperation of such individuals that uniformity in devices for the control of traffic on Ohio's streets and highways can be established.

An original article by Harry E. Neal (Mem.) Chief Engineer, Division of Traffic Safety Department of Highways, Columbus 15, Ohio.

Traffic Planning in Great Britain

Motor Industry Achievements

The motor industry of Great Britain has established a Public Relations Committee in order to put before the public more information of what the industry has done during the war and what it hopes still to do.

At a meeting on August 12th, Sir Miles Thomas explained how the motor industry had organized "production for victory" and spoke of the part it can play in rebuilding prosperity after the war. The provision of transport vehicles, heavy and light, was but a tithe of the contribution of the motor industry to the war effort.

Whether for the carriage of passengers or goods, the cost at which transport vehicles can be purchased and operated has a direct effect on the livelihood of the community. The long-distance lorry and the grocer's van play their part ultimately in the daily budget of the housewife. In fact, road transport is a vital thread in the economic fabric of the nation.

Given fair opportunity and encouragement, the industry can absorb hundreds of thousands of workers in well-paid employment. It can command export markets and thus prime the pipe-lines of international trade, and is a most powerful factor in the restoration of the nation's prosperity.

The speed with which the industry can get back into production after the war will be much quicker than is popularly supposed, provided that certain restrictions be removed.

In peace-time, or in war-time, the industry is one of our most valuable assets, and deserves to be looked upon not as the "goose that lays the golden egg" of taxation, but one of the most prized pedigree animals in the national stud.

Roads and Physical Planning

In an address to the Building Industries National Congress, Lord Sempill emphasized the importance of roads in physical planning. Roads today provided the most flexible, prompt, convenient and far-reaching mode of transport and travel; and they would for many classes of carriage prove to be the cheapest, were it not for the immense taxation—latterly £104,000,000 per annum, which was £43,000,000 per annum beyond what was taken for road expenditure from road motor moneys. It was deplored that their use had been attended by a great toll of accidents, due in part to the fact that no attempt had been made in the country, so far, to provide absolute segregation of the two types of road traffic which were substantially incompatible, namely, "through" traffic and "service" traffic, of which the latter, of course, included pedestrian traffic.

"The only known method of segregation is by means of the motorway. This was first developed by the Axis Powers, and was displayed by Germany to a large Parliamentary Committee consisting of both Houses in 1938. In 1935 Hitler was asked by the British chairman of a visiting automobile organization: 'What is your purpose in making these thousands of miles of motorways?' The answer was instant: 'I am making these Autobahnen in order that it may be possible to develop industry in those places which are best for each industry, and not be limited to sites where there happens to be a railway station.'

"It was found on these motorways that with average speeds as high as fifty-five miles per hour, the fuel and tire consumption per mile run, instead of rising as is well-known on our roads in these circumstances, was reduced by 30 per cent. It was also found, by contrasting the number of accidents on 100 miles of mixed traffic roads, and 100 miles on motorways between the same two places, that the accidents were reduced by 83 per cent on the motorways.

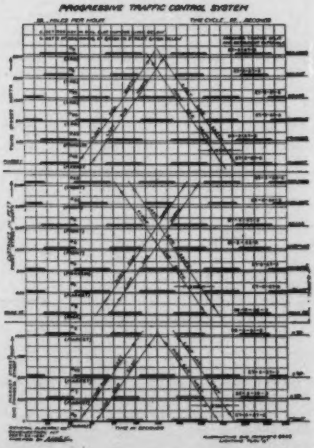
"These safe routes for segregated traffic should be run in this country wherever it is desirable to relieve the locomotion between a number of towns, villages and hamlets from the dangers of mixed traffic roads, while yet ensuring that the inhabitants are not cut off from the rest of the life of the community."

Lord Sempill quoted some interesting facts brought to light by Mr. Frederick Smith, which showed that out of 39,300 towns, townlets and villages in this country 31,500 were without railway stations. The effect of this isolation, taken together with the archaic road lay-out, had obviously influenced the undesirable concentration of industries and the urbanization of the industrial population. The Trunk Road Act, 1936, admitted the need for an improvement in road communications but the contemplated procedure of improving 4,500 miles of roads at an enormous cost, subsequently estimated to be £240,000,000, was unfortunate. All types of traffic would be attracted to the improved roads with disastrous consequences.

The need remained, added Lord Sempill, for a framework of motorways to relieve the other roads of the burden of through traffic which should never have been imposed on them.

Safe Traffic Flow Depends on Your Engineering

The G-E phantom-proof optical system, which makes signals clearly visible even in bright sunlight, is the result of G-E research.



Time-space diagrams charted from accurate statistics are the basis of efficient control systems.

How G.E. Can Help You

THE traffic engineers of the General Electric Illuminating Laboratory are specialists in the application of traffic-control equipment and in the solving of intricate traffic problems. They will assist you in your investigations and analysis. Their thorough laboratory investigations, engineering planning, and wide experience in the field make possible the dependable service which is available to you through our nearest office. *General Electric Co., Schenectady, N. Y.*

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Selected Bibliography on War Transportation

General

AUTOMOBILE TRANSPORTATION IN THE WAR EFFORT. By Charles L. Dearing. Washington: The Brookings Institution. 1942. 47 p. Price $.25.

THE CHALLENGE OF WARTIME TRAFFIC. Address by Pyke Johnson. Washington: Automotive Safety Foundation, 321 Tower Bldg. 1943. 8 p.

CONSERVATION OF VITAL WAR TRANSPORTATION. Washington: Office of Defense Transportation, Division of Local Transport. 1942. 35 p.

CONSERVATION OF WAR PRODUCTION TRANSPORTATION AND WAR FACTORY WORKERS. Lansing: Michigan State Safety Commission. May 11, 1942.

DIGEST OF PROCEEDINGS OF TRANSPORTATION CONFERENCE HELD AT CHARLESTON, W. VA. Charleston: West Virginia Highway Traffic Advisory Committee to the War Department, 316 Professional Bldg. Nov. 19, 1942.

EMERGENCY TRAFFIC CONTROL PLAN FOR INDUSTRIAL PLANTS. Boston: Liberty Mutual Insurance Company, Loss Prevention Dept. 1943. 4 p.

EMPLOYEE TRANSPORT PLAN FOR WAR INDUSTRIES. Boston: Liberty Mutual Insurance Company, Traffic and Safety Bureau. 1942. 19 p.

GETTING RESULTS THROUGH TRAFFIC ENGINEERING. Booklet II. Examples 25 through 48 published during last two years in the Getting Results Through Traffic Engineering series. New York: National Conservation Bureau, 60 John Street. Price $.25.

IOWA'S FIVE POINT PLAN FOR CONSERVATION OF VITAL WAR TRANSPORTATION. Des Moines: Iowa Highway Traffic Advisory Committee. 1942. 103 p.

LOCAL PASSENGER TRANSPORTATION CONSERVATION PROGRAM. Washington: Transportation & Communication Dept. Chamber of Commerce of the U. S. 1942. 13 p.

LOCKHEED-VEGA EMPLOYEE TRANSPORTATION SURVEY. Burbank, California: Lockheed Aircraft Corp., Market Research Division. 1942. 60 p. mimeo.

A MANUAL ON THE CONSERVATION OF VITAL WAR TRANSPORTATION AND VITAL WAR MANPOWER. Lansing: Michigan Safety Commisssion. 1942. 7 parts. Pt. I—Staggering of hours; Pt. II—Share the ride; Pt. III—Conservation of manpower through enforcement; Pt. IV—Better use of streets through selective engineering; Pt. VI—Operation of a transportation department of a factory or business; Pt. VII—Administration of Swap-Ride for "Mileage Rationing."

THE PROBLEM. Booklet Number 1, War Plant Employee Transportation Series. Published jointly by National Conservation Bureau and National Association of Manufacturers. New York; National Conservation Bureau, 60 John Street. 1943. 12 p.

MANUAL OF PROCEDURE, WAR INDUSTRY TRANSPORTATION SURVEYS. Washington: Highway Traffic Advisory Committee to the War Dept., 1340 No. Interior Bldg. December 1942.

MANUAL ON THE VERMONT PROGRAM FOR WAR TRANSPORTATION CONSERVATION. Montpelier: Vermont War Transportation Conservation Committee, Department of Highways. 1942. 24 p.

MANUFACTURING MILEAGE THROUGH EMPLOYEE TRANSPORTATION CONSERVATION. Providence: Rhode Island Council of War Agencies, 1051 North Main St. July 1943.

MARGINS OF MOBILITY. By Pyke Johnson. Washington: Automotive Safety Foundation, 321 Tower Bldg. 1943. 15 p.

NEW YORK STATE WAR TRANSPORTATION CONSERVATION PLAN. Albany: War Transportation Committee, 95 Washington Ave. 1942. 20 p.

NEW YORK STATE WAR TRANSPORTATION MANUAL. Albany: War Transportation Committee, 95 Washington Ave. 1942. 75 p.

1943 HIGHWAY TRANSPORTATION CHALLENGE. By Burton W. Marsh. Washington: American Automobile Association, Safety & Traffic Engineering Department, Pennsylvania Ave. & 17th St. 1943.

OFFICIAL MANUAL OF THE INDIANA WAR TRANSPORTATION CONSERVATION PROGRAM. Indianapolis: Governor's Coordinating Safety Committee. 1942. 87 p.

ORGANIZATION PLAN, ILLINOIS STATE HIGHWAY TRAFFIC ADVISORY COMMITTEE. Springfield: Illinois Highway Traffic Advisory Committee, Centennial Bldg. 1942. 41 p.

PROCEEDINGS, MIDWEST (CHICAGO) WARTIME CONFERENCE ON EMPLOYEE TRANSPORTATION (held under auspices of the ODT and sponsored jointly by the National Conservation Bureau and Illinois Manufacturers' Association). New York: National Conservation Bureau, 60 John St. May 26, 1943. 70 p. Price $1.00.

PROCEEDINGS, REGIONAL (NEW YORK) WARTIME CONFERENCE ON EMPLOYEE TRANSPORTATION (held under auspices of the ODT and sponsored jointly by the National Conservation Bureau and the National Association of Manufacturers). New York: National Conservation Bureau, 60 John St. February 25, 1943. 86 p. Price $1.00.

PROVIDENCE SCHOOL TRANSPORTATION SURVEY. By Leslie Williams and Phillip Robinson. Providence: War Transportation Committee, 14 College Street. 1943.

REPORT AND MANUAL ON WAR TRANSPORTATION IN MARYLYAND. Maryland Committee on Wartime Transportation. March 1943.

SCHOOL TRANSPORTATION . . . IN WARTIME. Washington: American Automobile Association, Mills Bldg. 1942.

SURVEY, EMPLOYEE TRANSPORTATION —CURTISS-WRIGHT. New York: National Conservation Bureau, 60 John Street. November 21, 1942. 9 p.

TRAFFIC ENGINEERING HANDBOOK. New York: Institute of Traffic Engineers and National Conservation Bureau, 60 John Street. 1941. 320 p.

TRANSPORT CONSERVATION. Washington: Chamber of Commerce of the United States. November 1942. 11 p.

TRANSPORTATION SURVEY OF THE ELECTRO METALLURGICAL CO. PLANT. Alloy, W. Va.: The War Transport Division of The State Road Commission of West Virginia in cooperation with The Public Roads Administration of The Federal Works Agency. 1943. 39 p.

TRANSPORTATION SURVEY. GASOLINE —TIRE CONSERVATION STUDY. Boston: State Planning Board, 11 Beacon St. June, 1943.

TRANSPORTATION SURVEY OF THE INTERNATIONAL NICKEL COMPANY PLANT. Huntington, W. Va., by the War Transport Division of the State Road Commission of W. Va. in cooperation with the Public Roads Administration of the Federal Works Agency. Charleston: Road Commission, Division of War Transportation. 1942. 39 p.

TRANSPORTATION SURVEY OF THE U. S. NAVAL ORDNANCE PLANT., S. Charleston, W. Va., by the War Transport Division of the State Road Commission of W. Va., in cooperation with the Public Roads Administration of the Federal Works Agency. Charleston: Road Commission, Division of War Transportation. 1942. 39 p.

TRANSPORTATION IN WAR INDUSTRY—STUDY NO. 1—THE HUMMEL-ROSS FIBRE CORPORATION, HOPEWELL, VA. Richmond: Virginia Department of Highways. 1942. 27 p.

WAR INDUSTRY TRANSPORTATION SURVEY OF BEECH AIRCRAFT CORPORATION, WICHITA, KANSAS. By the Kansas Highway Planning Survey and Kansas Highway Traffic Advisory Committee in cooperation with the Public Roads Administration, Federal Works Agency. 1942. 27 p.

WAR PERILS SCHOOL BUS TRANSPORTATION. Washington: American Automobile Association, Mills Bldg. 1943.

WAR PRODUCTION TRANSPORT. New York: Institute of Traffic Engineers, 60 John Street. 1942. 23 p.

WARTIME HIGHWAY TRAFFIC PROGRAM. Washington, D. C.: Automotive Safety Foundation, 321 Tower Bldg. 1942. 23 p.

WARTIME TRANSPORTATION PROBLEMS. Washington: Chamber of Commerce of the United States. 1943. 64 p.

WARTIME TRANSPORTATION. SURVEY MANUAL. New York: National Conservation Bureau, 60 John St. 1943. 89 p. Price $1.00.

WARTIME TRANSPORTATION. Trenton: New Jersey War Transportation Committee and the Office of Civilian Defense Director, State of New Jersey. July 16, 1942.

WARTIME TRANSPORTATION. A program by the Commonwealth of Pennsylvania in cooperation with the ODT and the National Highway Transportation Advisory Committee to the War Department. Harrisburg: Transportation Advisory Committee, Rm. 129, The Capitol. 1942. 13 p.

WAR WORKER TRANSPORTATION. By Theodore M. Matson. New York: Institute of Traffic Engineers, 60 John Street. 1943. 146 p.

Transit

ACCOMPLISHMENT REPORT FOR YEAR 1942. Washington: Office of Defense Transportation, Div. of Local Transport. 1943. 24 p.

BEATING THE BUS SHORTAGE. By Charlotte A. DuBois. "Bus Transportation" July 1943 issue, page 24. (New York).

FORTY-SEVEN BUSES. "Bus Transportation" September 1943 issue, page 52. (New York).

A HANDBOOK FOR SCHOOL BUS DRIVERS. Hartford: Connecticut State Department of Education, Bureau of Public Service Training. June 1943. 24 p.

MOVING THE MASSES IN MODERN CITIES. New York: American Transit Ass'n, 292 Madison Ave. 32 p.

NAVY AND TRANSIT COMPANY ATTACK NORFOLK PROBLEM. By Harold F. Hammond. New York: National Conservation Bureau, 60 John Street. Reprinted from the Transit Journal, August, 1942.

REPORT ON PUBLIC TRANSPORTATION. By Howard F. Ilgner. Milwaukee: Department of Public Works. November 1943.

THE TRANSIT INDUSTRY OF THE UNITED STATES. New York: American Transit Association, 292 Madison Avenue. 1942. 12 p.

TRENDS OF TRANSIT TRAFFIC. Address by Charles Gordon. New York: American Transit Association, 292 Madison Avenue. February 4, 1942. 28 p.

STATEMENT OF POLICY—STREET RAILWAY AND BUS OPERATIONS. Washington: Office of Defense Transportation, Div. of Local Transport. April 17, 1942.

PUBLIC TRANSIT. Booklet Number 4, War Plant Employee Transportation Series. Published jointly by National Conservation Bureau and National Association of Manufacturers. New York: National Conservation Bureau, 60 John Street. 12 p.

Staggered Hours

CINCINNATI STAGGERED HOUR SURVEY. Part I. New York: National Conservation Bureau, 60 John Street. 1942. 13 p. mimeo.

CINCINNATI STAGGERED HOUR SURVEY. Part II. New York: National Conservation Bureau, 60 John Street. 1942. 19 p. mimeo.

DESIGN TO EASE TRAFFIC CONGESTION ON THE NORTH WEST SIDE—CHICAGO: Chicago Surface Lines. 1943.

EFFECT OF STAGGERED HOURS IN WILMINGTON, DELAWARE. Chamber of Commerce, Delaware. October 9, 1942.

ESSENTIAL WARTIME STAGGERING OF HOURS. Buffalo: Transportation Technical Committee. 1943.

INCREASING TRANSIT LOAD—NECESSITY FOR WIDER STAGGERING OF HOURS. Philadelphia: Philadelphia Transportation Co.

PEORIA PULLS DOWN THE PEAKS. By Earl J. Reeder. "Public Safety" May 1943 issue.

A PLAN FOR STAGGERED HOURS IN ATLANTA TO MEET THE PUBLIC TRANSPORTATION EMERGENCY AND TO RELIEVE STREET TRAFFIC CONGESTION. Atlanta, Ga. Chamber of Commerce, Traffic Safety Committee. June 1942.

A PLAN FOR STAGGERED HOURS IN PHILADELPHIA. Philadelphia Metropolitan War Transportation Committee.

REDUCING PEAKS THROUGH STAGGERED HOURS. By J. A. Beeler in "Transit Journal," September 1940 issue.

A REPORT TO YOU ON STAGGERED HOURS. Atlanta: Chamber of Commerce, Traffic Safety Committee. September 1943.

REPORT ON BRIDGEPORT TRANSPORTATION SURVEY. Prepared for Bridgeport Chamber of Commerce, Bridgeport, Conn., by American Transit Association, 292 Madison Ave., New York, N. Y. March 30, 1942.

REPORT AND RECOMMENDATIONS ON STAGGERED HOURS FOR CENTRAL AREA OF THE CITY OF CHICAGO. Office of Conservation of Vital War Transportation.

REPORT OF TECHNICAL COMMITTEE ON STAGGERED HOURS. By Leslie J. Sorenson. Chicago: Bureau of Streets, City of Chicago.

REPORT ON PUBLIC TRANSPORTATION. Milwaukee Metropolitan Area by Study Committee on Staggered Hours and Transportation. Howard F. Ilgner, chairman. Nov. 1943.

RICHMOND STAGGERED HOUR SURVEY. Prepared for Special War Transportation Committee, Richmond Chamber of Commerce by Harold F. Hammond, National Conservation Bureau, 60 John Street, New York, N. Y. April 10, 1943. 25 p. mimeo.

STAGGERED HOURS. Washington: Chamber of Commerce of the U. S. Transportation and Communication Department. 1941. 15 p.

STAGGERED HOURS. Supplementary Report. Washington: Chamber of Commerce of the U. S., Transportation and Communication Dept. 1942. 20 p.

STAGGERED HOUR ANALYSIS, WAR PRODUCTION TRANSPORT COMMISSION, CITY OF SEATTLE, WASHINGTON. By J. W. Bollong. Seattle: Department of Public Works.

STAGGERED HOURS TO CONSERVE MASS TRANSPORTATION. Houston, Texas. City of Houston, Transportation Department.

STAGGERED HOURS — BIRMINGHAM PLAN OF STAGGERED HOURS AND ITS EFFECT ON TRANSIT OPERATIONS. Birmingham, Alabama. Ebasco Services, Inc.

A STAGGERED HOURS PLAN FOR 1943-44. Providence: Governor's Commission on Metropolitan Transportation, 14 College Street. October 13, 1943. 10 p.

A STAGGERED HOURS PLAN FOR ROCHESTER, N. Y. Prepared for Chamber of Commerce by Hawley S. Simpson and Harold F. Hammond: American Transit Association, 292 Madison Ave., New York, N. Y., July 30, 1943. 42 p.

STAGGERED HOURS STUDY OF THE CHAMBER OF COMMERCE, DELAWARE. Wilmington: Chamber of Commerce. 1942. 24 p.

A STAGGERED HOUR AND TRANSPORTATION PLAN FOR LANSING, MICHIGAN. Prepared for Lansing War Transportation Committee by Harold F. Hammond, National Conservation Bureau, 60 John St., New York, N. Y., Dec. 8, 1943. 42 p.

STAGGERED HOURS FOR WARTIME. By W. A. VanDuzer. 1941 Annual Proceedings of the Highway Research Board. Washington: National Research Council, 2101 Constitution Ave.

WARTIME PUBLIC TRANSPORTATION IN PROVIDENCE, R. I. By Leslie Williams and Phillip Robinson 14 College St., Providence, R. I., Nov. 1943.

Group Riding

CAR SHARING CLUB EXCHANGE AND SELF-DISPATCHING SYSTEM. Washington: Office of Civilian Defense. 1942. 8 p.

THE FORE RIVER TRANSPORTATION PLAN. Quincy, Mass.: Bethlehem Steel Company, Fore River Yard.

HOW TO FORM SHARE-RIDE GROUPS AMONG EMPLOYEES. Boston: Liberty Mutual Insurance Company. 1942. 6 p.

A PLAN FOR THE CONSERVATION OF VITAL WAR TRANSPORTATION. Washington: Office of Defense Transportation.

PROGRAM FOR AUTOMOBILE GROUP RIDING. Providence: Civic Planning and Traffic Board, Providence Chamber of Commerce. August 1942. 28 p. mimeo.

GROUP RIDING. Booklet Number 2, War Plant Employee Transportation Series, published jointly by the National Conservation Bureau and the National Association of Manufacturers. New York: National Conservation Bureau, 60 John St. 1943. 12 p.

Private Vehicle Conservation

AMERICA'S CAR CRISIS. By H. V. Kaltenborn. Chicago: The Pure Oil Company, 35 E. Wacker Drive. 1943. 15 p.

AUTOMOBILE SPEED ECONOMY. By H. S. Carter. Logan: Utah State Engineering Experiment Station. June 1942. 32 p.

THE AUTOMOBILE USER'S GUIDE WITH WARTIME SUGGESTIONS. Detroit: General Motors, Customer Research Staff. 64 p.

CAR CONSERVATION GUIDE. By Paul S. Lane. Muskegon, Michigan: Muskegon Piston Ring Co. 1942. 24 p.

CARE AND MAINTENANCE OF THE FARM TRUCK IN WARTIME. South Bend, Indiana: Studebaker Corp. 1943.

EMPLOYEE VEHICLE MAINTENANCE. Boston: Liberty Mutual Insurance Co., Loss Prevention Department. 1943. 8 p.

IF YOUR CAR COULD TALK. Published jointly by National Conservation Bureau and the National Association of Manufacturers. New York: National Conservation Bureau, 60 John Street. 8 p. 1943.

KEEP 'EM ROLLING. Washington: American Automobile Association, Mills Bldg., 1943.

MAINTAINING ESSENTIAL WARTIME AUTOMOBILE TRANSPORTATION. Report and Conclusions of Seminar at Ohio State University held June 28 to July 2, 1943. Columbus, Ohio: Ohio State University. 22 p. mimeo.

MOTOR VEHICLE INSPECTION MANUAL. Published jointly by the American Association of Motor Vehicle Administrators and the National Conservation Bureau. New York: National Conservation Bureau, 60 John Street. 1943. 128 p. Price 50c.

NATION LACKS WOMEN CAR DRIVERS. Reproduced from New York Herald Tribune, Sunday, February 7, 1943. New York: National Conservation Bureau, 60 John St.

AUTOMOBILE MAINTENANCE. Booklet Number 3, War Plant Employee Transportation Series. Published jointly by National Conservation Bureau and National Association of Manufacturers. New York: National Conservation Bureau, 60 John Street. 1943. 16 p.

REPORT ON PREVENTIVE MAINTENANCE AND INSPECTION PROCEDURE. Washington: Office of Defense Transportation, Division of Motor Transport. 1943. 8 p.

Route Improvement

CRITICAL SPEED AT BLIND INTERSECTIONS. Public Safety Memo No. 73. Chicago: National Safety Council, 20 N. Wacker Drive.

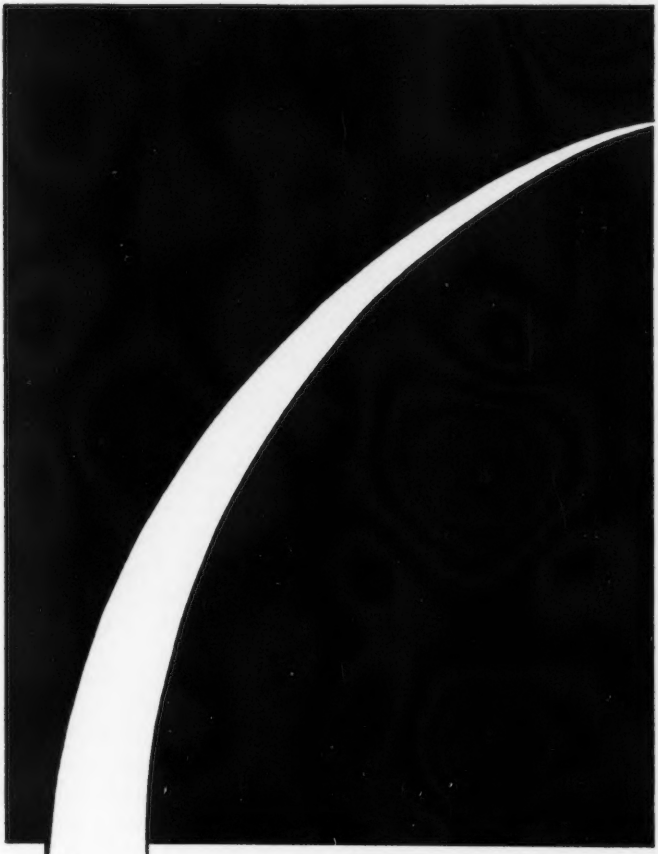
CRITICAL TIMES DEMAND EFFICIENT TRAFFIC REGULATION. By J. W. Bollong in the "Transit Journal," September 1940 issue. New York.

FITTING TRAFFIC CONTROL TO WARTIME. Washington: Office of Defense Transportation. 1943.

GETTING RESULTS THROUGH TRAFFIC ENGINEERING. New York: National Conservation Bureau, 60 John Street. A single sheet issued once a month.

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. Prepared by the American Association of State Highway Officials, Institute of Traffic Engineers, and the National Conference on Street and Highway Safety. Washington: American Association of State Highway Officials, 1220 National Press Bldg. November 1942. 208 p.

POINT CONTROL OF TRAFFIC. Evanston, Ill.: International Association of Chiefs of Police, Safety Division, 1827 Orrington Ave. 1943.



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TIMING STOP AND GO SIGNALS. Public Safety Memo No. 84. Chicago: National Safety Council, 20 N. Wacker Drive.

Tires and Rubber

CONSERVING TIRES OF BUSINESS AUTOMOBILES. New York: Metropolitan Life Insurance Co. 14 p.

REPORT OF THE RUBBER SURVEY COMMITTEE. Washington: Office of War Information, 14th and Pennsylvania, Division of Public Inquiries. 1942. 74 p.

THE RUBBER SITUATION. House Document No. 836. Washington: United States Government Printing Office. 1942. 45 p.

SYNTHETIC RUBBER—INTERNATIONAL RELATIONS—PATENTS. A statement presented by W. S. Farish, President, Standard Oil Company (N. J.), before the Senate Committee to Investigate the National Defense Program. Washington: 1942. 27 p.

TIRE WEAR AND THE FAILURES ON VARIOUS ROAD SURFACES. Washington: R. A. Moyer, Iowa State College, Ames, Iowa. June 1943.

TOMORROW'S TIRES. Talk by Norman Damon, Vice-President of the Automotive Safety Foundation, before Iowa Highway Traffic Advisory Conference, Des Moines, June 24, 1942. Washington: Automotive Safety Foundation, Tower Building, 11 p.

PROGRESS REPORT. No. 1, November 30, 1942. No. 2, February 18, 1943. No. 3, May 17, 1943. No. 4, November 10, 1943. Washington: War Production Board, Office of the Rubber Director.

This bibliography has been compiled by T. M. Matson (Mem.), Chairman of the Institute Committee on Wartime Transportation, as a project of this Committee, and with the assistance of the Committee and other Institute members.

COMMITTEE ON WARTIME TRANSPORTATION

Theodore M. Matson (Mem.), Director of the Yale Bureau of Street Traffic Research, Chairman of the Institute Committee on Wartime Transportation, reports the following: "A selected bibliography on the subject of wartime transportation has been prepared and is published elsewhere in this issue.

"A circularization of the views of the membership indicates that two wartime problems are outstanding at the present time. These deal with parking terminals and transit.

"While considerable concern was shown for transit problems, by far the greater interest was demonstrated in matters of parking terminals. A strong opinion was registered that many lessons have been learned in the development of terminal facilities at industrial plants during this war period. It was felt that these lessons should have some bearing on the approach to the establishment of adequate off-street facilities in the post-war era. The problem at the same time is particularly significant in the wartime period.

"Accordingly, the Committee on Wartime Transportation is now being contacted as to questions and procedures having to deal with the problem of off-street parking terminals. Questions such as: What are the motives for creating terminal facilities at war plants? What is the nature of the terminal demand? What are the design features of these terminals? What methods of operation have proven practicable? What costs have been involved?

"It is hoped that a uniform study procedure may be developed which can be applied to typical developments in the hope that a rather complete treatise on this subject of parking terminals at industrial establishments may be prepared by the next annual meeting of the Institute."

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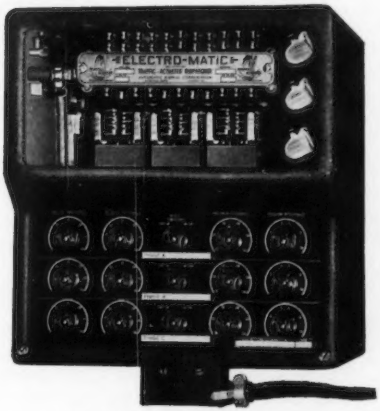

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ITE NEWS AND PERSONALS

Who's Who Among I. T. E. Members

This is the second of a series of articles featuring outstanding members of the Institute of Traffic Engineers. Last month this space was devoted to William Phelps Eno. Next month, Paul Hoffman will be featured.

THOMAS HARRIS MACDONALD, Honorary Member of the Institute, was born in Leadville, Colorado, on July 23, 1881. He attended Iowa State Teachers College from 1899 to 1900, and the following year entered Iowa State College of Agriculture and Mechanical Arts, receiving the degree of B.S. in Civil Engineering in 1904.

His Alma Mater has honored him twice since then, awarding him the honorary degree of Doctor of Engineering in 1929 and presenting him with the Marston Medal for achievement in engineering, in 1939.

After his graduation from Iowa State, Mr. MacDonald was employed for a time by the Chicago Great Western Railroad on track work.

In 1904 he became Assistant Professor of Civil Engineering at the Iowa College and was placed in charge of road investigation work. In 1906 he was appointed Highway Engineer with the first highway commission in Iowa and held this position until 1913, when he was made Chief Engineer of the commission.

Now in his 25th year as head of the Federal Government's road-building agency, Mr. MacDonald has administered highway programs ranging from $20,000,000 in Federal funds during his first full fiscal year in office, to over $300,000,000 in two of the depression years.

He has literally grown up with the country's highways. Before the end of his 15-year connection with the Iowa commission, Iowa had become the first State in the Middle West to establish a State-wide system of main roads, and about a third of the designated 6,400-mile network had been permanently graded, drained and bridged. The next step, hard-surfacing the system, had been planned and was about to get under way.

Becomes PRA Chief

It was in 1919 that Mr. MacDonald, the successful young chief executive of the Iowa commission, became Chief MacDonald of the U. S. Bureau of Public Roads, and it is as "Chief" that he is still affectionately known, although officially he is now the Commissioner of Public Roads and the "Bureau" he has so long headed has become the Public Roads Administration.

Always a pioneer, Mr. MacDonald's appearance upon the national scene occurred at the very beginning of the Country's greatest period of road building activity. The pieces of surfaced roads that then existed were scarcely long enough anywhere in the entire Country to stretch from one city to the next. Designation of the Federal-aid highway system was still 2 years in the future, and it was to the shaping of this first great master plan that the new Chief successfully devoted his creative energies. The Federal-aid system established, as it was by the Federal Highway Act of 1921, it was mainly Mr. MacDonald's insistent leadership that in the earlier years kept the Country upon the charted course. It was a course that in another decade was to lead to virtual complete connection of a nationwide system of main highways acclaimed and envied throughout the world.

But Mr. MacDonald was not satisfied. As usual his eyes were turned to the future and he saw that what had been done was only a beginning. He perceived that the phenomenal development of the motor vehicle had already rendered obsolete many of the roads that had been built. As a guide to the needed modernization he foresaw the necessity for a new master plan; and to lay the ground work for that plan, he persuaded the state highway departments to inaugurate the highway planning surveys.

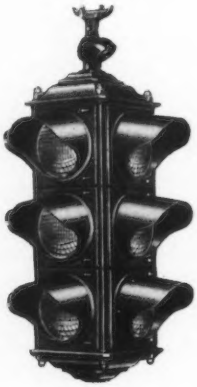
The basic surveys are now completed. The needed modernization is overdue. But thanks to Mr. MacDonald's vision, road builders the country over have a clear appreciation of the job ahead, and detailed planning now under way will assure a prompt postwar beginning of the new and greater program.

Many Affiliations

Mr. MacDonald is a member of the executive committee of the American Association of State Highway Officials; Chairman of the Highway Traffic Advisory Committee to the War Department and of the Highway Education Board; member of the Highway Research Board, National Safety Council, Pan-American Confederation for Highway Education, American Standards Association, American Planning and Civic Association, and Beta Theta Pi and Tau Beta Pi; Chairman of the American National Committee of the Permanent International Association of Road Congresses, and member of the Permanent International Commission, directing body of the Association of Road Congresses. Mr. MacDonald is an honorary member of the Institute of Traffic Engineers and of the American Society of Civil Engineers.

He has been active in the affairs of the International Association since 1926, attending its Milan, Italy, sessions that year, serving as Secretary General of the 6th Congress, held in Washington, D. C., in 1930, and heading the official American delegation to the Congress that met at The Hague in the Netherlands in 1938.

Mr. MacDonald has won recognition from three foreign countries. The French government conferred on him the Cross of the Legion of Honor, the King of Norway invested him as a Knight of the First Class in the Order of St. Olav, and the Czechoslovakian government appointed him a Foreign Member of the Masarykova Akademie Prace.



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PERSONALS

GRAHAM COLE (Mem.), Director of Safety, Welfare Division, Metropolitan Life Insurance Company, has been elevated to the position of Assistant Secretary of the company. Mr. Cole will keep up his safety work, in addition to the broadened scope of activity and authority conferred by his new position.

JAMES W. WELSH (Mem.), has resigned as Engineer-Manager of the Transit Research Corporation, in order to join the Local Transport Division of ODT in the capacity of Regional Assistant. He took over new duties on December 1st and is assigned temporarily to the Philadelphia office.

1ST LT. JAMES R. GUTHRIE writes from England ". . . The work I am doing over here is very interesting and I like it a lot. Except for being in uniform and in a strange country, it is very much the same type of work I was doing before entering the service. . . . Best regards to all the members of the Institute."

MAJOR LIGHT B. YOST (Affil.), on leave from General Motors Corporation, writes from somewhere in Sicily ". . . All of us here are quite well agreed that the post-war period will father an entirely new and broadened conception of the functions of a traffic engineer. I am glad to hear that the mills of progress are grinding, insofar as I.T.E. is concerned. We here have certainly had to learn the hard way but we are pretty well sold that transportation is the big objective and that all of the factors we have been playing with previously are but important phases of the problem . . . recently I was appointed Transportation Officer for the Seventh Army, which makes me responsible for all forms of transport. . . ."

MAJOR HARRY D. KAMY (Jun.) sent Christmas greetings via V-mail from overseas to the Institute of Traffic Engineers.

WM. R. MCCONOCHIE (Mem.), Traffic Engineer, Chicago Surface Lines, reports that "Twenty-three members of the I.T.E. held an impromptu luncheon at the Edgewater Beach Hotel, Chicago, on November 30th, during the annual meeting of the Highway Research Board. A little betting pool conducted by Burton W. Marsh revealed that 13 states of birth were represented by the 23 men present."

LT. (j.g.) JAMES K. GIBSON (Jun.), recently entered the United States Naval Reserve and is now stationed at San Diego, California. Mr. Gibson was formerly with the New Orleans Public Service, Inc., New Orleans, Louisiana.

DONALD BERRY (Assoc.), Director, Traffic and Transportation Division, National Safety Council, appeared on an NBC broadcast in Chicago recently, in a program featuring "Post-War Traffic Problems." RUSSELL HARRISON (Assoc.), traffic engineer with the National Safety Council, appeared on a similar broadcast over Station WAAF. Both these broadcasts were in connection with the National Safety Council's new Post-War Traffic Safety Planning Committee.

LAURENCE B. TIPTON (Affil.), War Safety Training Supervisor of the National Committee for the Conservation of Manpower in War Industries and the U. S. Government's first director of its industrial safety training program, recently attained the rank of Lieutenant Colonel in the U. S. Army.

GUY KELCEY (Mem.) has resigned as regional director, ODT Division of Local Transport, Atlanta, Georgia, and has entered the service of the Port of New York Authority. He will devote his efforts to the organization and development of highway transportation facilitation in the New York metropolitan area.

LT. COLONEL H. E. STEDMAN (Mem.), on leave as Traffic Engineer,

City of Des Moines, writes from overseas ". . . I have had a chance to visit some of the large plants here who normally are in traffic signal construction work . . . had dinner in one plant and spent an hour or so in each division of the factory. They were very interested in our approach to the traffic problem and in our Traffic Engineers' Handbook; my copy has been passed around among the plant officials . . . I haven't run across any of the Institute members here yet. My work is in G-4 of Base Section."

STUART HAWLEY (Affil.), Traffic Engineer, The Texas Company, is in South America on a special mission for the United States Government. Mr. Hawley promises to present a report of his activities at a future meeting of the New York I.T.E. Section.

Major Barton Awarded Medal

By command of General Eisenhower, Major GEORGE W. BARTON (Mem.), on leave from the Chicago Motor Club, has been awarded a Legion of Merit medal for "exceptionally meritorious conduct in the performance of outstanding services from 11 December, 1942 to 23 July, 1943."

The official citation continues, "As Chief of the Land Traffic Division, Headquarters, Third Port, T. C., he was charged with the clearance of vitally needed supplies from the port of Oran. His outstanding knowledge of transportation problems, careful planning and keen foresight contributed greatly to the smooth, timely and efficient movement of Allied supplies and equipment from the port. His demonstrated ability to solve traffic problems in the Base Section made possible the swift movement of supplies and personnel by highway and the maximum usage of convoy space. His constant devotion to duty and tireless efforts in maintaining a high standard of operational efficiency were an inspiration to all those with whom he worked and reflect the highest traditions of the military service."

Washington, D. C., I.T.E. Section

Formation of the Washington, D. C. Section of the Institute was effected at a meeting at the Hamilton Hotel on Wednesday evening, December 29th. Nineteen of the thirty-five members in this area were in attendance. They included:

Wallace L. Braun	LaVerne Johnson
Lewis V. Bullis	D. W. Loutzenheiser
Charles F. Cashell	Burton W. Marsh
Norman Damon	C. W. Prisk
Wilfred W. Davis	D. Grant Mickle
John B. Ecker	W. L. Robinson
Maurice O. Eldridge	I. S. Shattuck
William G. Eliot, III	Peter J. Stupka
D. Jackson Faustman	Martin C. Stark
Phillip E. Taylor	

William G. Eliot, III, was elected treasurer and Grant Mickle was elected chairman for 1944. An Arrangements Committee was appointed, composed of C. W. Prisk, Chairman; B. W. Marsh, and John B. Ecker. It was decided to hold dinner meetings on an informal basis with men in allied interests to be invited to give informal off-the-record talks.

At the first meeting, Mr. Joseph Barnett, Principal Senior Highway Design Engineer, was a guest and talked informally to the group. It was evident that from his remarks that there is a vast opportunity available to engineers specializing in traffic engineering techniques.

N. Y. I.T.E. Section

December 9th witnessed the second dinner meeting of the newly formed New York Section, which was presided over by Merwyn Kraft, American Transit Association, substituting for Hawley Simpson. The twelve assembled members enjoyed an evening

of banter and good fellowship, highlighted by entertainment provided by John Gibala (all present received souvenir "ash trays" as a result) and a brief talk by Stuart Hawley. Others in attendance were Keneth Hoover, Paul Green, Wilbur Smith, Major Wetzel, Harry Koch, Henry Evans, Harold Hammond, Virden Rittgers, and Dr. Bruce Greenshields.

Major Wetzel was chosen to preside at the next meeting, scheduled for January 20th at the Hotel Holley, New York City. It is expected to be a big meeting in view of the many out-of-town members who will be attending the ASCE Ninety-first Annual Meeting in New York City on January 19-21.

Detroit Jobs Open

The Detroit Civil Service Commission has announced that positions are open for a number of engineering jobs, ranging from $3,588 per year to $4,870 per year. Immediate employment is available to qualified persons in the architectural, civil, mechanical, electrical, and structural divisions of the City Engineer's staff. Persons interested should contact the Detroit Civil Service Commission, 16th floor, Water Board Building.

LOOKING AHEAD

NORTHWESTERN UNIVERSITY TRAFFIC INSTITUTE will open its Spring four months' course in Traffic Police Administration of February 7, 1944. Attention is called to sixteen $600 fellowships and sixteen $150 tuition scholarships that are available to municipal, state, and county police officers.

AMERICAN ROADBUILDERS ASSOCIATION will hold its 41st annual convention at the Edgewater Beach Hotel, Chicago, February 1-3, 1944. The meetings will be largely devoted to these problems: the shortages of material, repair parts and manpower; post-war highway construction; and the post-war construction equipment problem.

I.T.E. Annual Meeting

Plans for the 1944 annual meeting and cooperative mid-year meetings were initiated at a meeting in Chicago on December 1st by E. H. Holmes and Matthew Sielski, Co-Chairmen of the I.T.E. Committee on the annual meeting and mid-year sessions.

New Members

By action taken by the Board of Direction in Chicago on November 30, the following were admitted to Institute membership:

LLOYD REID (Mem.), Traffic Engineer, Detroit, Michigan.

ARTHUR KNOSKE (Assoc.), Detroit Traffic Engineering Bureau.

MARGARET WOOLVERTON (Jun.), Assistant Traffic Engineer, National Safety Council, Chicago, Illinois.

An up-to-date roster of the membership has been mailed out to all members of the Institute.

Definition of Traffic Engineering

The official definition of the profession as adopted by recent vote of the membership — "Traffic Engineering is that phase of engineering which deals with the planning and geometric design of streets, highways, and abutting lands, and with traffic operation thereon, as their use is related to the safe, convenient, and economic transportation of persons and goods."

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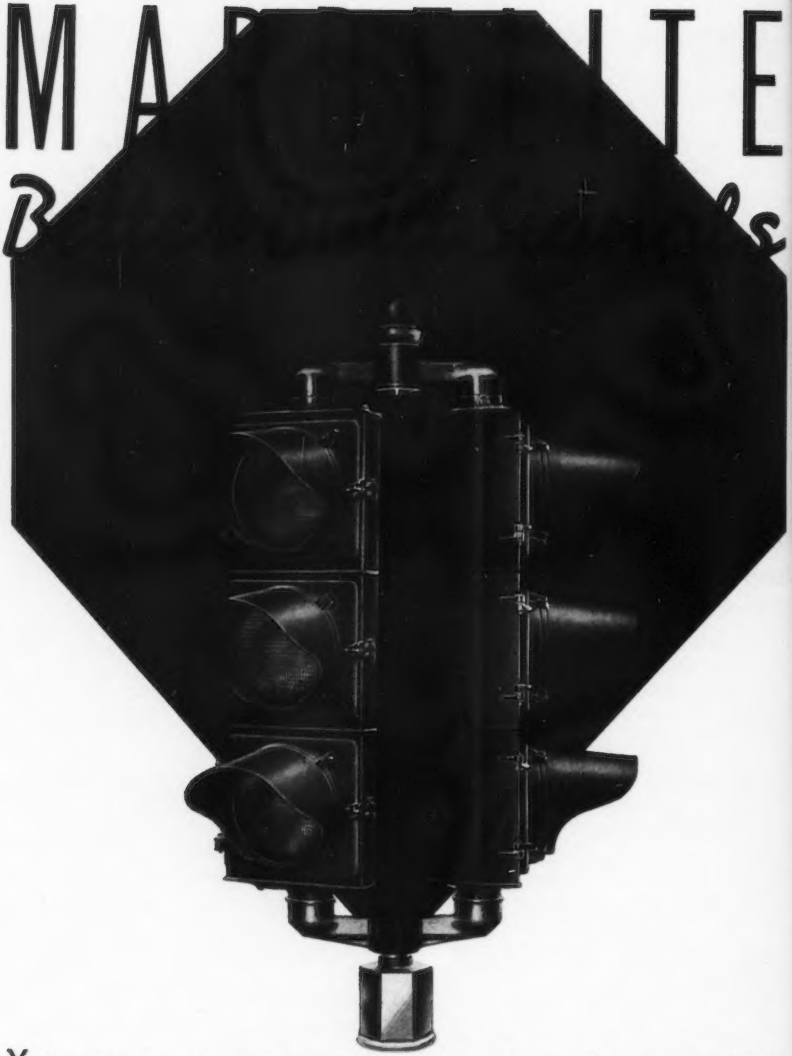

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Note the reinforced aluminum mounting brackets that replace the conventional pipe and fitting assembly. A compact, sturdy arrangement, eliminating small, minor parts.

You bet! It is BETTER-BUILT quality.

That isn't all, but it gives an idea of why Marbelite Signals are approved by numerous State and City Traffic Departments as well as Traffic Associations, and why there are so many thousands of Marbelite Signals in use in these Cities and States.

Familiarize yourself with other Marbelite features, such as the unbeatable optical unit. You will be proud to have such fine quality Signals regulating traffic in your community.

THE MARBELITE COMPANY, INC.

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